SHINYBOW™

MULTIMEDIA AUDIO AND VISUAL

Instruction Manual

MODEL : SB-5645

4x4 HDMI MATRIX SWITCHER

HDMI Matrix Switcher Series

Thank you for purchasing the SB-5645 4x4 HDMI Matrix Switcher. You will find this unit easy to install and highly reliable but it is essential that you read this manual throughly before attempting to use 4x4 HDMI Matrix switcher.

Part No.: ENCL005645000A2

SAFETY INFORMATION

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK),
NO USER SERVICEABLE PARTS INSIDE,
REFER SERVICING TO QUALIFIED SERVICE PERSONAL.

WARNING!

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

This symbol is intended to alert the user to the presence of uninsulated of uninsulated "dangerous voltage" within the products enclosure that enclosure tha may be of sufficientmagnitude to constitue a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operational and maintenance (serving) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarised) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.
To prevent electric shock, match wide blade of plug to wide slot, fully insert.

1. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
2. Read all documentation before operating your equipment. Retain all documentation for future reference.
3. Follow all instructions printed on unit chassis for proper operation.
4. Do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
5. Make sure power outlets conform to the power requirements listed on the back of the unit.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
8. Mains voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
9. Power down & disconnect unit from mains voltage before making connections.
10. Never hold a power switch in the " ON " position.
11. Do not use the unit near stoves, heat registers, radiators, or other heat Producing devices.
12. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be Periodically " blown free " of foreign matter.
13. Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages. There are no user serviceable parts inside.
14. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
15. Non-use periods. The power cord of equipment should be unplugged from the outlet when left unused for a long period of time.
16. Service Information Equipment should be serviced by qualifier service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance
    E. The equipment has been dropped, or the enclosure damaged.

IMPORTANT SAFETY INSTRUCTIONS

To insure the best from this product, please read this manual carefully. Keep it in a safe place for future reference.

To reduce the risk of electric shock, do not remove the cover from the unit. No user serviceable parts inside. Refer servicing to qualified personnel.

To reduce the risk of fire, do not expose the unit to rain, water or excessive moisture.

Do not force switched or external connections.

When moving the unit disconnect the serial port connections first then the power cable and finally the interconnecting cables to other devices.

Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Use a clean dry cloth.

Installation of this unit should be in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold.

THIS SAFETY INFORMATION IS OF A GENERAL NATURE AND MAY BE SUPERSEDED BY INSTRUCTIONS CONTAINED WITHIN THIS MANUAL

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INTRODUCTION AND PACKAGE CONTENTS

INTRODUCTION

The SB-5645 is high-performance 4x4 matrix routing switcher for HDMI signals. This switcher supports data rates up to 6.75 Gbps, enabling 1080p HDMI formats and UXGA/WUXGA/DVI resolution to any HD display. High Definition Digital signals can be selected and distributed to any 4 outputs simultaneously. The Switcher is certified as being fully HDMI® and HDCP® compliant, with RoHS, CE, FCC certification. Support high resolution HDMI sources routed to HDMI displays, monitors, projector or audio receivers. The EDID can be selected between seven (8) different modes. Control is provided via Front panel push buttons, IR remote or via RS-232. An RS232 Windows GUI interface is provided for matrix routing.

PACKAGE CONTENTS

1. Main console unit
2. Operating Instructions
3. IR Remote Controller (SW-5645E)
4. 19 inch Ear mount bracket (Part # 1U-440L)
5. IR Extender receiver (SB-100)
6. CD Contents: This manual, Windows GUI
7. RS232 Cable
8. Power Supply 12VDC, 3A Universal Type 50/60Hz, 100~230 VAC

INTRODUCTION AND PACKAGE CONTENTS

FEATURES

1. 4x HDMI digital source devices matrix switched to 4x HDMI devices.
2. HDMI digital video w/embedded audio, DVI format and CEC/HDCP 2.0 compliant
3. Seven (7) function key control and worldwide EDID modes for HDTV resolutions.
4. Link speeds of up to 6.75 Gbps (link clock rate of 225Mb Hz), Support HDMI 1.4a 3D formats.
5. Wide range of HD resolutions from PC XGA to WUXGA 1920x1200 and HDTV/DTV resolutions 480i/480p, 576i/576p, 720p, 1080i & 1080p
6. Compatible with all HDMI source devices, PC monitors, Plasma HD display, HDTV and audio receivers/amplifiers.
7. Digital Video TMDS formats Resolutoin up to 1080P-60 with Deep color 36-bit.
8. Digital Audio Support : - Dolby TrueHD, Dolby Digital, Dolby Digital Plug/ex,
   - DTS, DTS-HD, DTS-HD Master, DTS-EX
   - PCM, PCM2, LPCM2..
9. Various User Interface control:
   - Windows based GUI control via RS232 port
   - Front Panel push button
   - IR wireless remote control
   - Third party RS232 controller (via simple ASCII)
10. Support world wide control functions: ALL/OFF/RECALL/ENTER/MEMORY/EDID/LOCK
11. Support EDID modes :
    Internal modes : AUTO/1080P-2CH/1080P-5.1/1080P-7.1/1080i-2CH/720P-2CH
    External modes : Passing mode.
12. Automatic scanning input & output status via LED show on front panel.
13. Support IR Remote and IR Extender with distance up to ~ 1000' (300M) Maximum.
14. EDID configuration via Internal modes.
15. Consumer Electronic Control (CEC) switch all open or OFF

The Switcher will remember that last state during a power cycle.
When power is removed and resorted, the last configuration will be invoked.

SPECIFICATIONS

SPECIFICATIONS

Type of HDMI Switcher	4x HDMI inputs To 4x HDMI Outputs Matrix Switcher
HDMI Support	HD 1080P-@60Hz, H36-bit Deep color, 3D (1.4a) formats.
HDCP / CEC Support	HDCP 2.0 Compliant, CEC Compliant.
Video Bandwidth	Double Data Rates:225Mhz, Total 6.75Gbps bandwidth.
Digital Video Support	Full HD resolution : 480i / 480p / 720p / 1080i / 1080p
Digital Audio Support	Multi Audio Formats 5.1 / 7.1, MAT(MLP) Dolby Digital, Dolby TrueHD, Dolby Digital Plus, DTS, DTS-ES 6.1, DTS-HD, DTS-HD-HRA, DTS-HD Master, (PCM-2CH)
Controls	IR Remote Controller IR External port x 1 (OD 3.5mm Ear phone Jack) Select & Function buttons on front panel RS 232 series interface
Preview output	
Source Status	Automatically Scan Sources Inputs via LED
Function Control Key	ALL / OFF / RECALL / ENTER / MEMORY / LOCK / EDID
Infrared Frequency	38 Khz
IR External Distance	~1000 feet / 300 meters maximum.
HDMI I/O Connector	HDMI Type A - SMD 19pin Female Type
Temperature	32˚F - 100˚F Operation (0℃ - 38℃)
Dimensions	LxWxH=19” x 9.85” x 1.75” (482mm x 250mm x 44mm)
Rack Mount	Rack Mount 1RU High 19 ” Rack Mount (with rack mount)
Power Supply	DC12V / 3A, Universal world wide Type 50/60Hz, 100~230 VAC
Power Consumption	2150 mA Maximum
Safety Approvals	CE, FCC, RoHS (2002/95/EC).
Product Weight	1.85 Kgs / 3.08 lb

As product improvement is continuous, specifications are subject to change and without notice or liability.

EDID FUNCTION

EDID function Setup

EDID setup	To change the **EDID** setup
Step 1 . Press the **EDID** button	The display will show the currently selected EDID mode
Step 2 . Press **SOURCE** #1 or #2 button row	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 3 . Press the **ENTER** button	To set **EDID** mode. The switcher will return to operation mode.
Operation will abort if no keys are pressed within 5 seconds.	

6.1 Embedded EDID modes	Total 8 EDID Modes
Embedded EDID setup Press **EDID** > **SOURCE** > **ENTER** **SOURCE** #1 or **SOURCE** #2 	to select **EDID** mode. Repeatedly depressing the **source 1** button will cycle **up** thru the options. Repeatedly depressing the **source 2** button will cycle **down** thru the options. Embadded EDID : Mode 1 : **FSS** Mode 2 : **H24-3D** Mode 3 : **H24M-3D** Mode 4 : **H36** Mode 5 : **H36M** Mode 6 : **H36-3D** Mode 7 : **H36M-3D** Mode 8 : **AUTO**

EDID FUNCTION

EDID function : 8x Embedded EDID Modes

Mode 1 . **FSS**® (Fast Speed Start) 	Automatic capture most suitable EDID from Destination to Source.
Mode 2 . H24-3D (1080p-24 bits) 	Audio Support : PCM 2CH
Mode 3 . H24-3D-M (1080p-24bits) 	Audio Support : MAT(MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH
Mode 4 . H36 (1080p-36 bits) 	Audio Support : PCM 2CH
Mode 5 . H36-M (1080p-36 bits) 	Audio Support : MAT(MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH
Mode 6 . H36-3D (1080p-36 bits) 	Audio Support : PCM 2CH
Mode 7 . H36-3D-M (1080p-36 bits) 	Audio Support : MAT(MLP) 7.1CH, PCM 2CH, One Bit Audio 2CH, AC-3 5.1CH, DTS 5.1CH, PCM 7.1CH, Dolby Digital + 7.1CH, DTS-HD 7.1CH
Mode 8 . **AUTO** <Default> 	All Outputs will be set to the highest common resolution of all connected display devices.

EDID function for HDMI Matrix Switcher

6.2 LEARNING EDID	Learning EDID from Destination to Source
Learning EDID setup Press **EDID** > **DESTINATION** > **SOURCE** > **ENTER** 	Switcher will **LEARN** destination EDID and pass the selected source.

NOTE : The already learned EDID cannot be modified. You can only rebuild a new Learning EDID.

For example;
When the Source has "Learned" the EDID data from a destination, It will save that EDID information into EPROM and the EDID data cannot change.
Please select new learning destination to sources or change to one of the embedded EDID modes when you want to remove the learning EDID memory from EPRPM.

EDID Function : LEARNING

6.2.1 Learning EDID **Single to Single**	Example : Learn Destination #4 EDID To Source #3.
Step 1 . Press **EDID** button	The button will flash blue and the display will show the current **Embedded** EDID Status.
Step 2 . Press the Destination #4 button row	Copy the Destination #4 Display EDID.
Step 3 . Press the Source #3 button row	Learning the Destination #4 EDID To Source # 3.
Step 4 . Press **ENTER** button	To confirm entries.

6.2.2 Learning EDID **Single to multiple**	Learning destination EDID link to the majority Sources
Step 1 . Press **EDID** button	The button will flash blue and the display will show the current **Embedded** EDID Status.
Step 2 . Press the Destinations #1~4 button row	Copy any 1~4 Destinations EDID.
Step 3 . Press the Source #1, #3,#4 button row	Learning the Destination EDID link to source #1,#3,#4 .
Step 4 . Press **ENTER** button	To confirm entries.

6.2.3 Learning EDID **Single to ALL**	Learning destination EDID link to All Sources
Step 1 . Press **EDID** button	The button will flash blue and the display will show the current **Embedded** EDID Status.
Step 2 . Press destination button 1 thru 4	Learning anyone 1~4 Destination EDID to all sources.
Step 3 . Press **ALL** button	Learning selected destination EDID to all sources.
Step 4 . Press ENTER button	To confirm entries.

EDID FUNCTION

EDID function for HDMI Matrix Switcher

6.3 EDID status	To view the current **EDID** status.
Step 1 . Press **EDID** button	The button will flash blue and the display will show the current **Embedded EDID** Status.
Step 2 . Press **EDID** button	To exit.

6.4 How to setup FSS® Function	Fast speed start®
Step 1 . Press the Destination #1~4 button row Then Press the Source #1~4 button row	To setup and Install all devices.
Step 2 . Press EDID button	Select a optimum status of **Embedded** EDID mode.
Step 3 . Press ENTER button	To conform entries.
Step 4 . Press EDID button	To select the EDID **FSS®** mode.
Step 5 . Press ENTER button	To conform entries.

6.5 LEARNING EDID definition	Learning EDID from Destination to Source

1. Switcher will **LEARN** destination EDID and pass the selected source.
2. To set up learning between a single destination and single source:
   Press **EDID** button > Press **Destination** 1 thru 4 > Press **Source** 1 thru 4 > Press **ENTER** to confirm.
   Switcher will learn destination EDID to source device.
3. To set up learning between a single destination and Multiple sources:
   Press **EDID** button > Press **Destination** 1 thru 4 > Press the majority **Sources** 1 thru 4 > Press **ENTER**.
   Switcher will learn single destination EDID to many source devices.
4. How to Learning single destinations with all sources.
   Press **EDID** button > Press **ALL** button > Press **ENTER** to confirm.

6.6 Auto mode definition	Common Resolution and Audio

Switcher will find highest common Resolution and Audio from all destination EDID to link Source.

Example for single source

Destination > press #1 and then Source > press #1

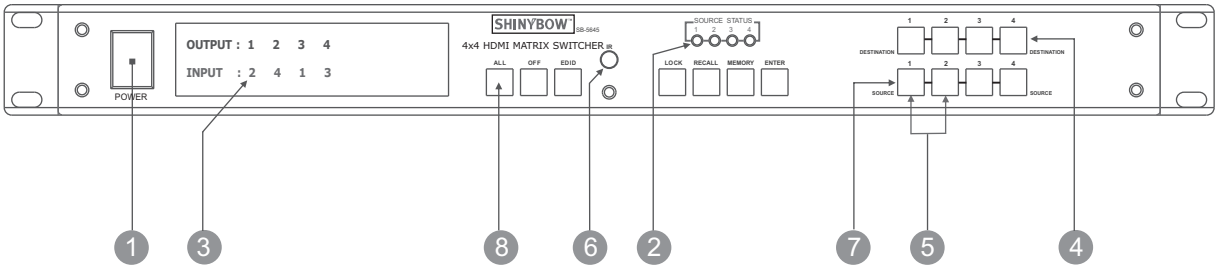
Destination device #1 will set to the highest common resolution and Audio of source #1

Example for multiple sources

Destination device #1, #2, #3 will be set to the highest common resolution and Audio available and source device #1 will output this same resolution.

FRONT PANEL

FRONT PANEL



1 POWER SWITCH

The power switch turns the unit on and off. The LCM will illuminate red to indicate that the switcher is ON and is receiving power.
The Switcher will remember that last state during a power cycle.
When power is removed and resorted, the last configuration will be evoked.

2 INPUT STATUS DISPLAY

Input sources 1 to 4 LCM illuminates blue to indicate that a video source is present on that input.

3 OUTPUT STATUS DISPLAY

Each Output (destination) Channel shows which input (source) is assigned.

4 DESTINATION SELECT BUTTONS

Separate outputs 1 thru 4 select buttons are provided for each destination assignment.
Routing can be Source to Destination or one source to multiple destinations.
Example : Press Destination 1,2,4 then press Source 2 will route Input 2 to Output 1,2,4 respectfully.

5 EDID MODE SELECT BUTTONS

Used to select EDID mode using Input buttons #1 and #2.

6 IR SENSOR

The IR sensor receives IR commands from the supplied remote controller or third party IR emitter.

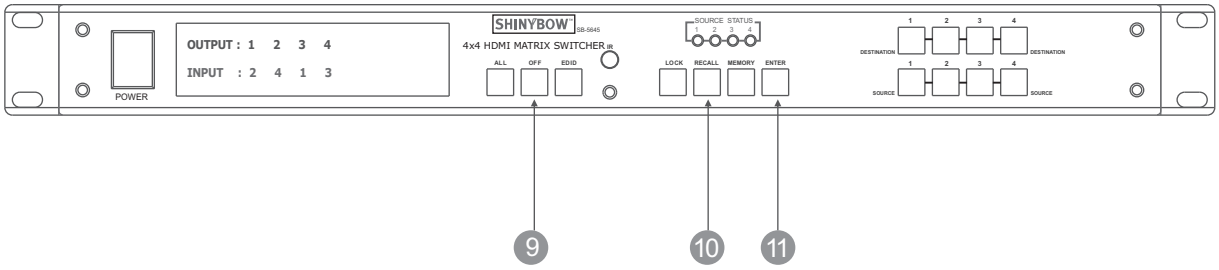
7 SOURCE SELECT BUTTONS

Separate inputs 1 thru 4 select buttons are provided each source selection.

8 FUNCTION KEY - **ALL**

Disables (mute) video on all destinations OR Selects the same source to all destinations.
Option 1
- Press **ALL** followed by **OFF** button. The display will show " 0 " indicating all destinations have no video selected.
Option 2
- Press **ALL** followed by Source 1 thru 4. The display will show the Source selected.
- Press **ENTER** The pre-set source selection will be assigned all destinations.

FRONT PANEL



9 FUNCTION KEY - **OFF**

Disables (mute) video to selected channels. Either destinations.
- Press **OFF** button followed by any Destination channel.
- Press 1 thru 4 output destination. The display will show " 0 " for the selected channel indicating no video selected.

10 FUNCTION KEY - **RECALL**

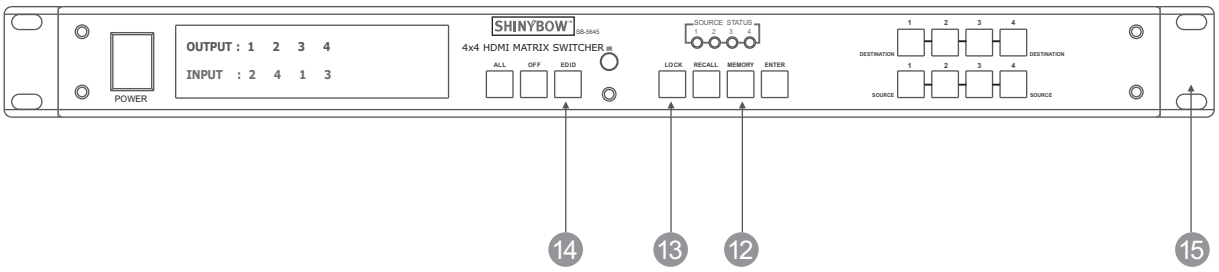
The system will show previously stored presets, up to a total of 8.
Presets are stored in local memory using Source keys 1 thru 4 or Destination keys 1 thru 4 as the memory preset location.
- press **RECALL** button.
- press 1 thru 4 on either Source or Destination row.
- press **ENTER** The pre-set configuration will execute.

Operation completes.
Note: *Operation will abort if no keys are dressed within 5 seconds.*

11 FUNCTION KEY - **ENTER**

Press **ENTER** to confirm entries.

FRONT PANEL



12 FUNCTION KEY - **MEMORY**

The system will show store presets, up to a total of 8.
Presets are stored in local memory using Source keys 1 thru 4 or Destination keys 1 thru 4 as the memory preset location.
- Configure desired matrices..
- Press **MEMORY** button.
- Press 1 thru 4 on either Source or Destination row.
- Press **ENTER** to ready memory location.
- or press **MEMORY** again to cancel operation.

Operation completes.
Note : Operation will abort if no keys are pressed within 5 seconds.

13 FUNCTION KEY - **LOCK**

- Press and hold **LOCK** button for two seconds lockout the front panel.
- Press and hold **LOCK** button for two seconds to enable the front panel.

14 FUNCTION KEY - **EDID**

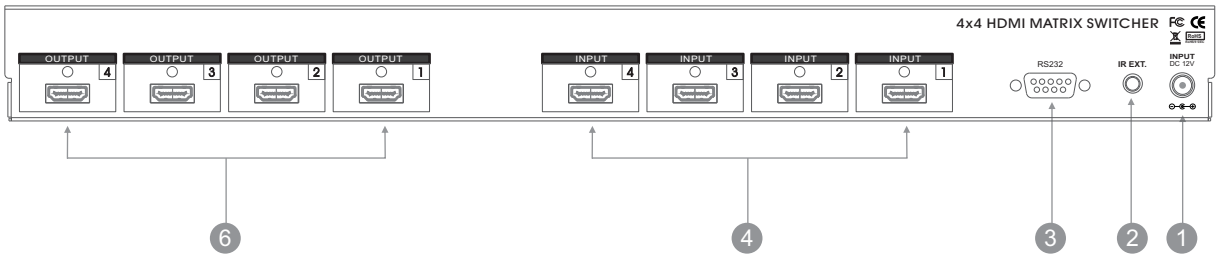
- press **EDID** to select new EDID mode or select source row #1 or #2 for LINK source EDID again.

15 19 INCH EAR MOUNT PAIR

Converts desktop to 19 inch rack mount. Bracket (part # 1U-440L) INCLUDED.
Image shows rack mount bracket attached.

REAR PANEL

REAR PANEL



1 DC POWER INLET

The Switcher is fitted with a DC power plug input connector. Ensure that the used is of an approved type and is of sufficient current carrying connector capacity with the correct voltage and connector polarity. 12Volt DC power supply 3A Max (Center pin positive).

Power Jack:
DC Jack - inner OD ϕ 2.1mm (+)
Outside OD ϕ 5.5mm (GND)
Power input - 12VDC, 3A

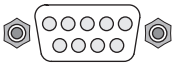
2 IR EXTENDER CONTROL

Support one of IR Extender
Extend distance maximum 300Meters / ~1000 feet
When you plug the External IR extender into the switcher, the front panel IR receiver remain active.

IR Extender Jack:
Female Jack - inner OD ϕ 3.5 mm

3 RS 232 CONNECTION

RS 232 control port to allow for interfacing to a PC, Such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.

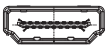


Remote port :
DB-9pin Female connector

4 INPUTS- 1,2,3, & 4 HDMI

Connect a signal link of HDMI direct digital video/audio to this Female HDMI connector. This connector supports HDMI digital video/audio and DVI digital video sources.

HDMI Digital Video/Audio, Connector with fix screw
Input 1 ~ Input 4

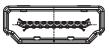


HDMI digital video/audio connector:
HDMI Female connector.
Note:
With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant. DVI does not support audio.

5 OUTPUTS- 1,2,3,& 4 HDMI

Connect a signal link of HDMI direct digital video/audio to this Female HDMI connector. This connector supports HDMI digital video/audio and DVI digital video sources.

HDMI Digital Video/Audio, Connector with fix screw
Output 1 ~ Output 4



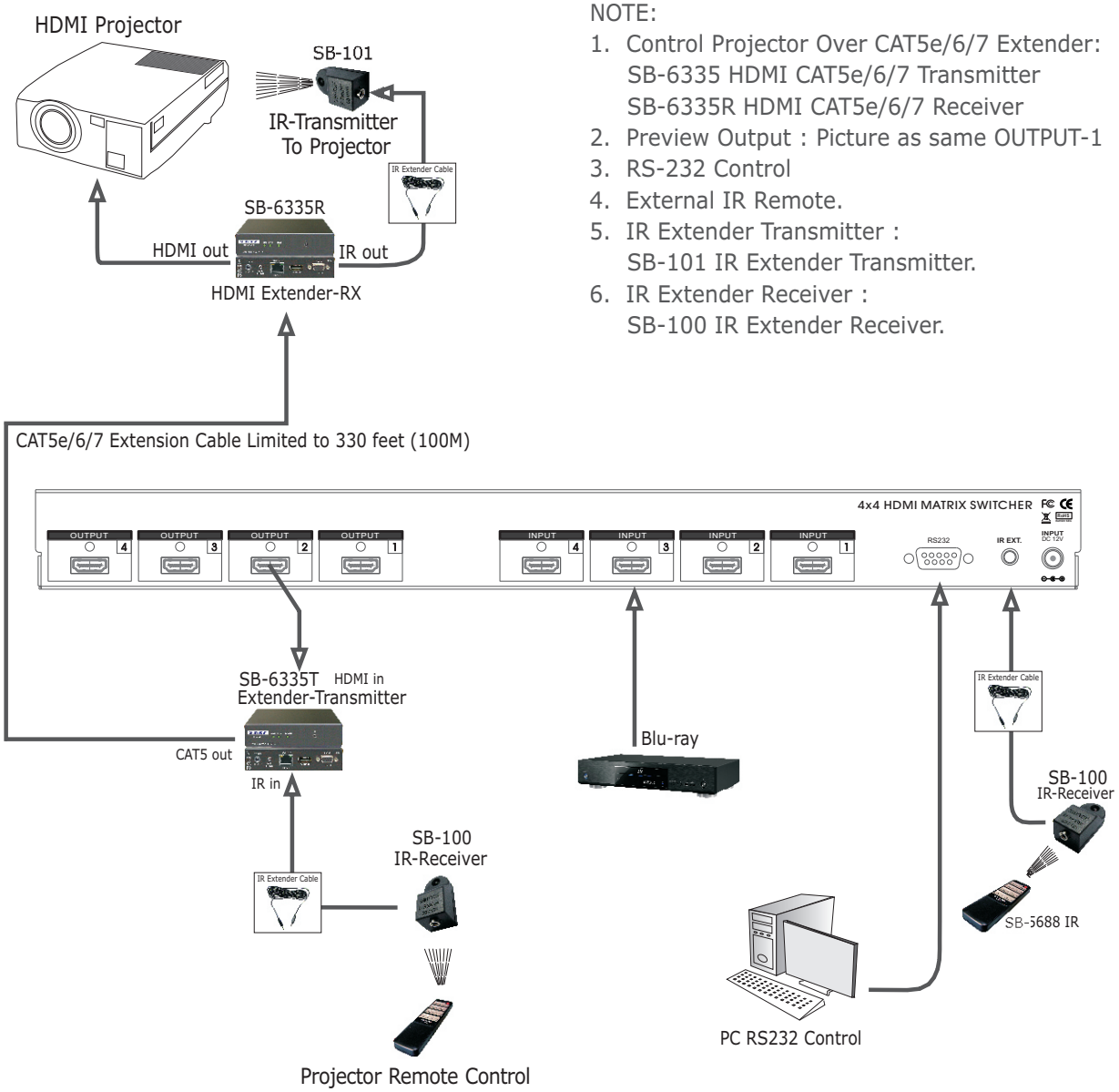
HDMI digital video/audio connector:
HDMI Female connector.
Note:
With the proper adapters, the switcher can be used with DVI digital video signals HDCP compliant.

TYPICAL APPLICATION

INSTALLING DIAGRAM

4x4 HDMI MATRIX SWITCHER

Sample connection using IR Transmitters (SB-101) and IR Receiver (SB-100) with SB-6335T & SB-6335R to control a projector.



NOTE:

1. Control Projector Over CAT5e/6/7 Extender:
   SB-6335 HDMI CAT5e/6/7 Transmitter
   SB-6335R HDMI CAT5e/6/7 Receiver
2. Preview Output : Picture as same OUTPUT-1
3. RS-232 Control
4. External IR Remote.
5. IR Extender Transmitter :
   SB-101 IR Extender Transmitter.
6. IR Extender Receiver :
   SB-100 IR Extender Receiver.

Support HDBaseT Extender by SB-6335 Transmitter and SB-6335R Receiver via CAT5e/6/7 cable

TYPICAL APPLICATION

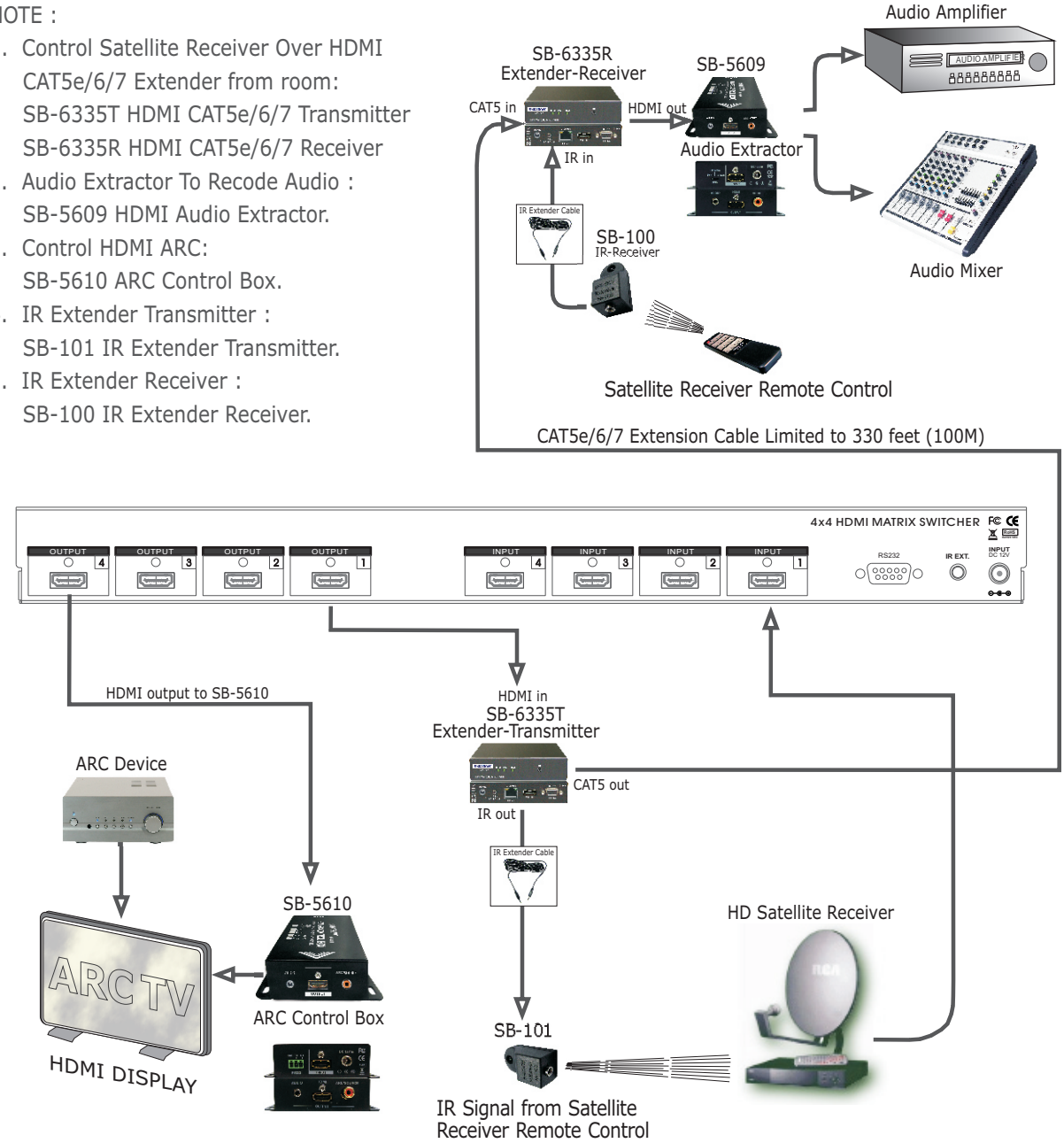
INSTALLING DIAGRAM

4x4 HDMI MATRIX SWITCHER

Sample connection using IR Transmitters (SB-101) and IR Receivers (SB-100) with SB-6335T and SB-6335R to control a Satellite Receiver.

NOTE :

1. Control Satellite Receiver Over HDMI CAT5e/6/7 Extender from room:
   SB-6335T HDMI CAT5e/6/7 Transmitter
   SB-6335R HDMI CAT5e/6/7 Receiver
2. Audio Extractor To Recode Audio :
   SB-5609 HDMI Audio Extractor.
3. Control HDMI ARC:
   SB-5610 ARC Control Box.
4. IR Extender Transmitter :
   SB-101 IR Extender Transmitter.
5. IR Extender Receiver :
   SB-100 IR Extender Receiver.



Support HDBaseT Extender by SB-6335 Transmitter and SB-6335R Receiver via CAT5e/6/7 cable

REMOTE CONTROL

Before making any connections to the switcher. Observe the following:

> Ensure the mains voltage supply matches the label on the supplied plug-Pack (+/- 10%)

> Ensure that the power switch is OFF

> Ensure that all system grounds (earth) are connected to a common point.

> Avoid powering equipment within a system from multiple power sources that may be separated by large distances

> Connect all audio video sources and destination equipment

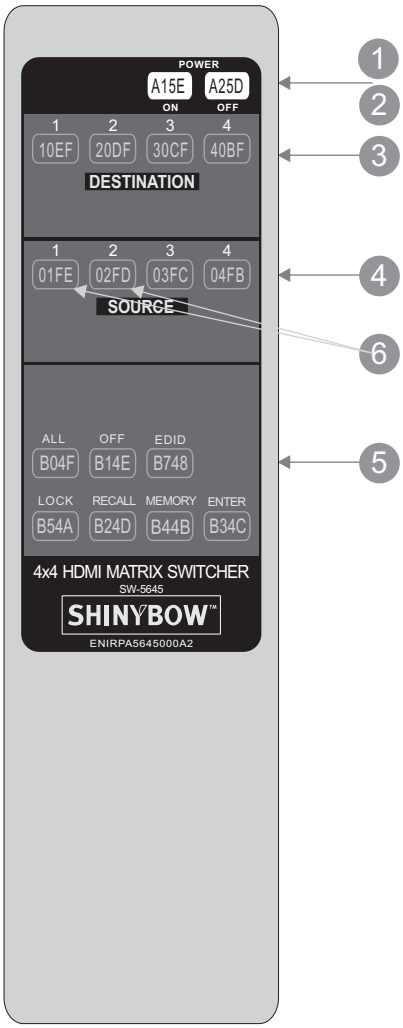
> power up all source and destination audio-visual sources

> For each destination output select the appropriate input source by using The front panel input 1~8 select buttons. The supplied IR remote control. Or through the RS 232 serial communications port.

> Upon power up the switcher will return to its last used setting before Powered down.

REMOTE CONTROL

IR REMOTE : SW-5645



IR REMOTE CONTROL KEY :

1 2 SWITCH POWER ON or OFF

Controller with a separate power ON and OFF

3 DESTINATION : 1 thru 4 OUTPUT SELECTION

Press the destination button to select the output display channel.

4 SOURCE : 1 thru 4 INPUT SOURCE SELECTION

Press input 1~4 sources with selection button

5 FUNCTION KEY

ALL - function selection button
DEMO or ENTER - function selection button
EDID - function selection button
LOCK - function selection button

6 SELECT EDID MODES : press source button 1 thru 2.

1 Mode 1 : **FSS** (Fast Speed Start)
2 Mode 2 : **H24-3D**
3 Mode 3 : **H24M-3D**
4 Mode 4 : **H36**
5 Mode 5 : **H36M**
6 Mode 6 : **H36-3D**
7 Mode 7 : **H36M-3D**
8 Mode 8 : **AUTO**

IR REMOTE CUSTOM AND DATA CODES (NEC Standard)

HOW TO SETUP IR CODES :

CUSTOM CODE : 1C E3

DATA CODE :

POWER ON : 1CE3 A15E
POWER OFF : 1CE3 A25D

ALL : 1CE3 B04F
OFF : 1CE3 B14E
EDID : 1CE3 B748
LOCK : 1CE3 B54A
RECALL : 1CE3 B24D
MEMORY : 1CE3 B44B
ENTER : 1CE3 B34C

PRESS TV DESTINATION - # then PRES AV SOURCE -

DESTINATION #1 : 1CE3 10EF
DESTINATION #2 : 1CE3 20DF
DESTINATION #3 : 1CE3 30CF
DESTINATION #4 : 1CE3 40BF

SOURCE #1 : 1CE3 01FE
SOURCE #2 : 1CE3 02FD
SOURCE #3 : 1CE3 03FC
SOURCE #4 : 1CE3 04FB

For example;
Select Destination # 1 to show Source #1~4,

The IR Data Code list :

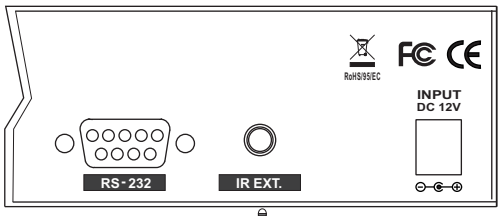
Destination # 1 , Source #1	1CE3	10EF	1CE3	01FE
Destination # 1 , Source #2	1CE3	10EF	1CE3	02FD
Destination # 1 , Source #3	1CE3	10EF	1CE3	03FC
Destination # 1 , Source #4	1CE3	10EF	1CE3	04FB

Press EDID Mode key :

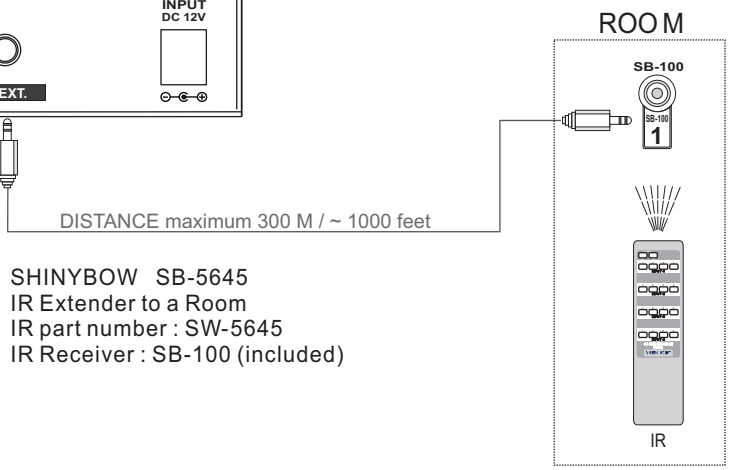
Mode 1 : **FSS** : 1CE3 E01F
Mode 2 : **H24-3D** : 1CE3 E11E
Mode 3 : **H24M-3D** : 1CE3 E21D
Mode 4 : **H36** : 1CE3 E31C
Mode 5 : **H36M** : 1CE3 E41B
Mode 6 : **H36-3D** : 1CE3 E51A
Mode 7 : **H36M-3D** : 1CE3 E619
Mode 8 : **AUTO** : 1CE3 E718

IR EXTENDER

REAR PANEL IR EXTENDER PORT



IR EXTENDER CONNECTION



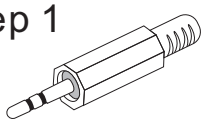
SHINYBOW SB-5645
IR Extender to a Room
IR part number : SW-5645
IR Receiver : SB-100 (included)

*** *When you plug the External IR extender into the switcher, the front panel IR receiver remains active.* ***

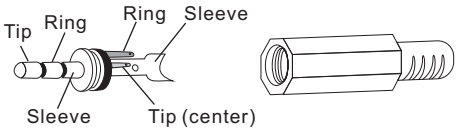
IR EXTENDER PACKAGE :

HOW TO SETUP THE IR EXTENDER COMPONENTS

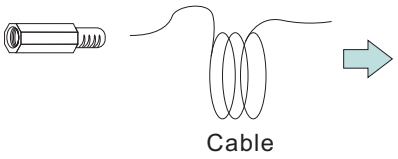
Step 1



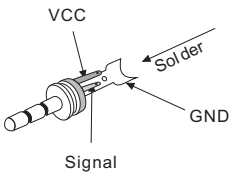
Tip:Signal
Ring:VCC
Sleeve:GND

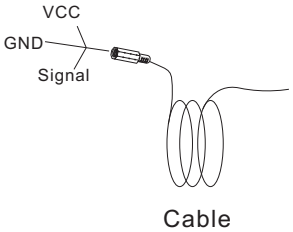


Step 2

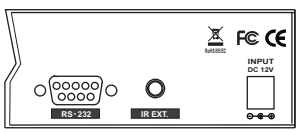


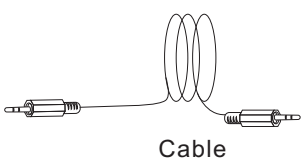
Step 3





Switcher IR EXT. In





IR Receiver (SB-100)

CONSUMER ELECTRONICS CONTROL (CEC)

CONSUMER ELECTRONIC CONTROL (CEC)

In brief, CEC allows HDMI devices to control each other when necessary and allows the user to operate multiple devices with one remote control handset.

To Enable CEC

- Press **EDID** button
- Press **ALL** button
- Press **EDID** button The pre-set configuration will execute.

To Disable CEC

- Press **EDID** button
- Press **OFF** button
- Press **EDID** button The pre-set configuration will execute.

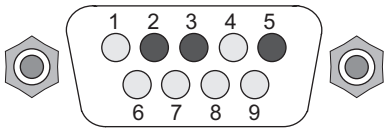
Not all device support CEC. Check with your Users Guide for additional information and specifications.

To ensure stable operation, HDMI connections should only be made with switcher powered OFF.

RS-232 SERIAL INTERFACE

RS-232 SERIAL INTERFACE CONNECT a PC or CONTROL SYSTEM. VERSION COMPATIBLE V2.0.1

For a complete list of commands, please reference external document extended RS-232 Protocol Instruction Manual.



RS-232 SERIAL INTERFACE

Pin	RS-232	Definition
1	------	Not used
2	TX	Transmitter
3	RX	Receiver
4	------	Not used
5	GND	Ground
6	------	Not used
7	------	Not used
8	------	Not used
9	------	Not used

RS-232 PROTOCOL COMMANDS (RS232 Control driver V2.0.1)

The Shinybow switcher can be controlled via the RS-232 serial control port to allow for interfacing to a PC, or similar third party control system.

The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1. When the unit recognises a complete command it will perform the requested action - there is no delimiter character required.

LIMITED WARRANTY

SHINYBOW WARRANTY

SHINYBOW Technology warrants this product against defects in materials and workman ship for a period of 3 years from the date of purchase.

Should this product, in SHINYBOW Technology's opinion, Prove defective within this warranty period, SHINYBOW Technology, at its option, will repair this product without charge, to whatever extent it shall deem necessary to restore said product to proper operation condition. This does not extend the warranty period.

This warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, and abnormal operating condition or non-SHINYBOW Technology authorized modification to the product.

If repairs are necessary under the warranty policy, the original purchaser must return the product to local distributor, freight prepaid.

After repairs are complete, the product will be returned.

REGULATORY COMPLIANCE

The product complies with the relevant standards for CE, FCC and RoHS approval.

The power Adaptor/Supply has been tested for compliance with UL.CSA and CE standards.

TROUBLESHOOTING

If you experience a <no signal> with this switcher or distributor outputs, first make certain that the signal being fed to its inputs is acceptable.

Disconnect the cables from the this switcher or distributor inputs and connect them directly to an appropriate monitoring device, if you do not see or hear a signal the problem may well be he signal source itself. Also check that the AC outlet you have used to power the switcher or distributor is actually providing power as a wall switch often controls an AC outlet.

The second most common problem with this switcher or distributor revolves around the cables, Inspect the cables for loose connectors or cable damage such as crushed cable or cables with cuts or nicks. Replace any cable exhibiting these problem.

You also must use the highest quality cables if you want to achieve the best results. Poor quality cables provide will poor quality signals.

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